

2015-16 SQUIRREL HUNTING COOPERATOR SURVEY REPORT



KENTUCKY DEPARTMENT OF FISH AND WILDLIFE RESOURCES

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Thank you to all the hunter cooperators who sent in hunting logs for the Fall Squirrel Hunting Cooperator Survey. Your efforts are appreciated, and we encourage you to continue sending in your hunting logs. Encourage your hunting buddies to do the same! Survey participation has been decreasing over the past few years so be sure to recruit your friends. The following report will cover the results of last season's (2015-16) Fall Squirrel Hunting Cooperator Survey and the 2015 Mast Survey. Last season's harvest and hunting effort totals are included as well as the current population trends, along with an outlook for the upcoming season.

I. 2015-16 Fall Squirrel Hunter Cooperator Survey

The squirrel survey was developed in 1995 as a voluntary initiative. Hunters are asked to record data including date of hunt, county hunted, hours hunted, number of hunters, number of dogs, and number of fox & gray squirrels (seen, killed, and wounded), on a diary-type hunting log. Logs are available on the internet: <http://fw.ky.gov/Hunt/Pages/Game-Species.aspx> or by calling **1-800-858-1549**. Hunters simply keep the log up-to-date as the hunting season progresses, and mail it to Kentucky Department of Fish and Wildlife (KDFWR) Headquarters when they're finished hunting for the season. Data collected from the survey gives the KDFWR information that can be used to monitor squirrel population trends in Kentucky and better serve the hunters of the state. Each year participating hunter cooperators are mailed a new hunting log, the results of the survey, and a small gift. Hunters who wish to receive a copy of their log from the previous year may call 800-858-1549 ext. 4458 or e-mail john.morgan@ky.gov.

Summary of Last Year's Hunter Logs

Participation has been decreasing over the last several years. Once again, don't forget to mail in your log and encourage other squirrel hunters to do the same. Why not take someone new hunting this year? The future of hunting depends on it.

2015-16 Overview:

- Logs were received from 81 hunters.
- Hunters averaged 13.5 hunting trips throughout the season.
- 24% of hunts included the use of dogs.
- Average hunt lasted 2.8 hours.
- Data was provided from 1,101 hunts.
- Data was provided from 70 counties across Kentucky.
- Central Region = 586 hunts East Region = 185 hunts West Region = 330 hunts (*see Appendix A for regional map*)
- Hunters saw an average of 5.8 squirrels per **hunt**.
- Hunters saw an average of 2.1 squirrels per **hour**.

The number of squirrels seen and killed by hunters decreased as the season progressed (Figure 1).

- Hunters saw an average of 4.9 gray squirrels per hunt and 0.9 fox squirrels per hunt.
- Hunters saw an average of 1.8 gray squirrels per hour and 0.3 fox squirrels per hour.

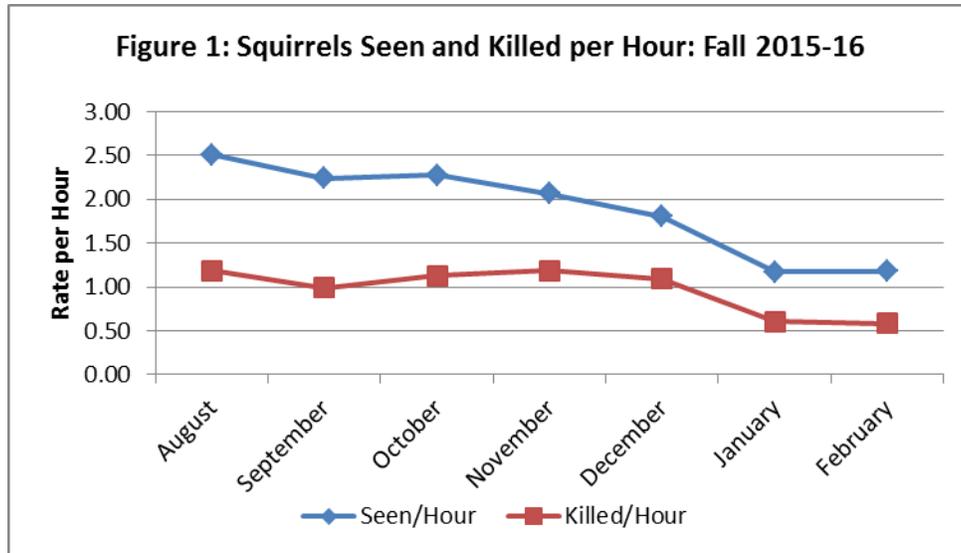


Figure 2 shows the long-term trend for the number of gray and fox squirrels seen per hour.

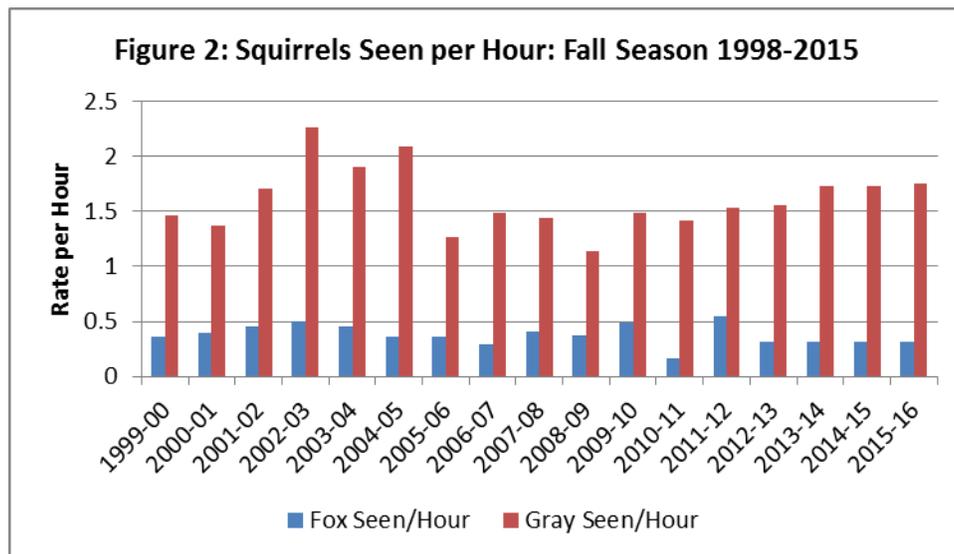


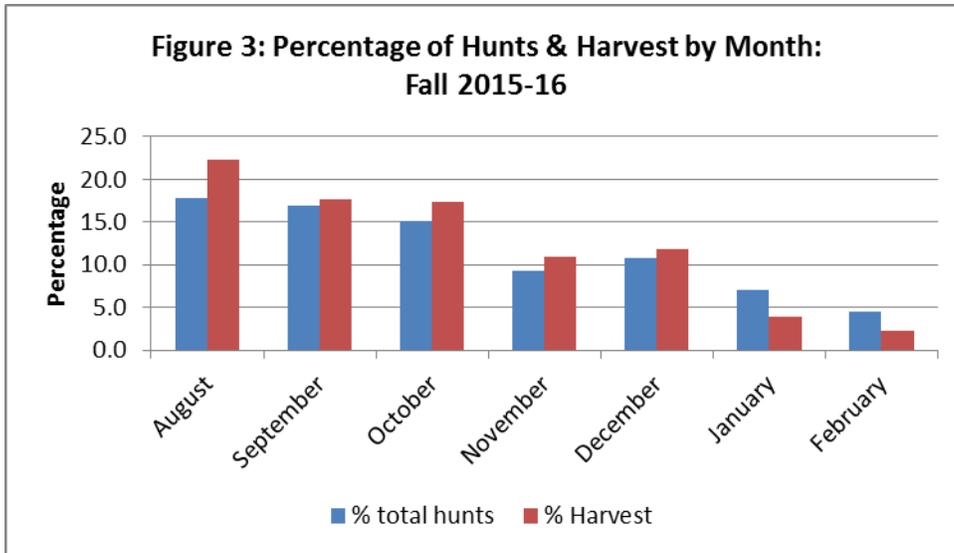
Table 2. Summary of Fall Squirrel Hunter Cooperator Survey data; 2009-2015 squirrel season.

STATISTICS	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Total cooperators	109	97	85	83	81	86	81
Total hunts	1319	1134	1144	1123	1077	1079	1101
Total counties	91	82	76	69	72	73	70
Average hunts/cooperator	12.1	11.6	13.3	13.5	13.2	12.5	13.6
Total hours	3499	2946	3063	3319	3097	3016	3017
Hunts using dogs (%)	11.0	14.4	13.0	13.8	17.6	20.4	24.3
Total fox squirrels seen	1254	1625	947	1053	1005	929	994
Total fox squirrels killed	653	818	487	550	533	473	492
Total fox squirrels wounded	66	52	40	39	35	31	23
Total gray squirrels seen	5321	4184	4684	5145	5342	5213	5275
Total gray squirrels killed	2744	1895	2315	2389	2561	2451	2654
Total gray squirrels wounded	206	153	177	227	185	164	156
Harvest of squirrels seen (%)	50.8	46.7	49.7	47.4	48.7	50.7	50.2
Squirrels wounded (%)	4.0	3.5	3.8	4.3	3.4	3.1	2.9
Hunting mortality (%)	54.8	50.2	53.6	51.7	52.2	53.8	53.1

Hunter Effort

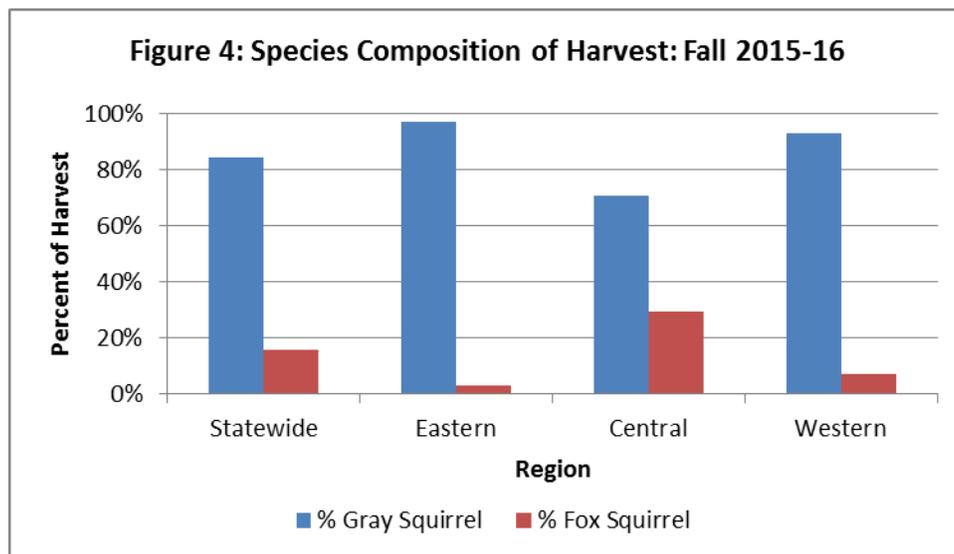
Hunting effort was only slightly greater towards the beginning of squirrel season. Thirty-five percent of the hunts took place in August and September (Figure 3).

The hunter effort index declined as the season progressed, and squirrel-hunting trips were rare in January and February. Squirrel hunting is one of a few seasons open in August and September, and later season opening dates for deer, waterfowl, rabbit, grouse, and quail may account for the greater hunting effort taking place towards the beginning of squirrel season. The percentage of hunts dropped beginning in November, with only 9% of the total hunts occurring in this month. The drop in hunting rate was likely a direct result of the onset of deer gun season. Historical Hunter Cooperator data shows a similar trend.



Harvest

- Hunters harvested 50.2% of squirrels seen and wounded 2.9%. Assuming wounded squirrels did not survive, the hunting mortality rate was 53.1% of squirrels seen in 2015-16.
- Statewide, 84% of the harvest was comprised of gray squirrels (Figure 4). The rate suggests Kentucky squirrel hunters prefer hunting in more extensive forests and woodlands, common to gray squirrels, than small woodlots and fencerow-type habitats where fox squirrels are often found. It also demonstrates that gray squirrels are more abundant than fox squirrels.



II. 2015 Mast Survey Results

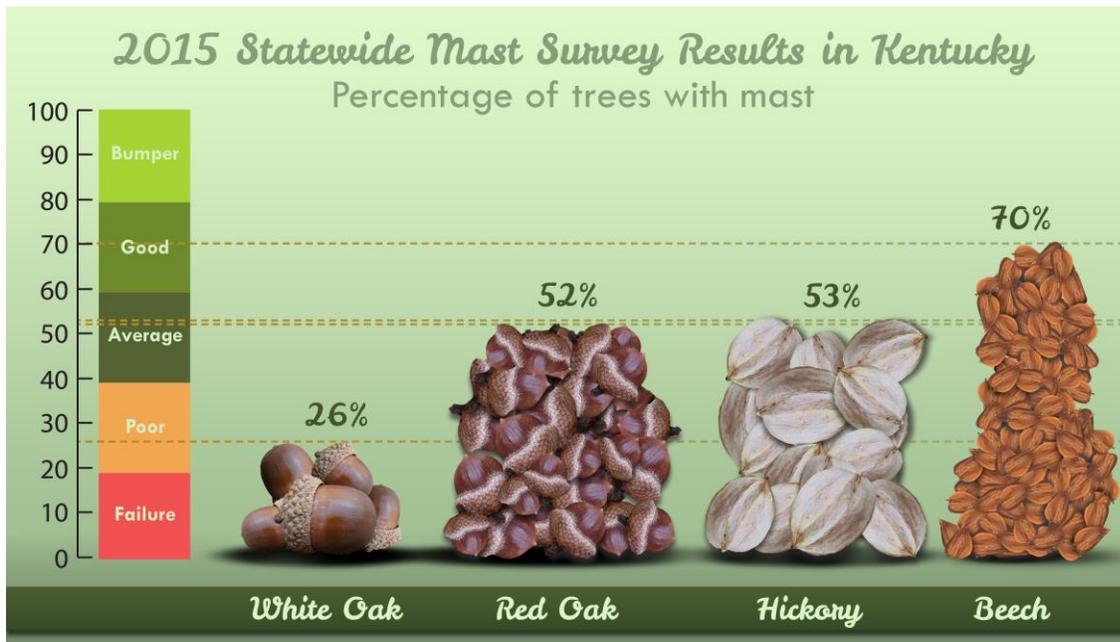
A statewide mast production survey of Kentucky's most important producers of wildlife foods was initiated in 1953 and has been conducted annually thereafter. A close relationship has been found between a given year's mast production and the following year's squirrel population level statewide. The mast survey looks at the 3 primary mast producing tree groups (hickories, red oaks, and white oaks) with American beech being the only individual species surveyed.

Summary of the Survey

The chart (mast results) shows the proportion of trees bearing acorns (PBA) or other mast across Kentucky. As an example, 52.0% listed in the red oak column means that for every white oak tree surveyed in Kentucky in 2015, an average of 57% of those trees contained acorns. Statewide, mast production in 2015 was average for hickory and red oak trees. Beech was quite strong with 70% of trees bearing fruit.

Statewide

Mast Results:



III. 2016-17 Fall Squirrel Hunt Forecast

The 2015 mast crop was rated “average” for red oak and hickory. Beech trees produced quite a bit of mast as well. Without a doubt, Kentucky’s forests were well stocked with food last fall and winter. This falls squirrel hunting should be fantastic! Last year, hunters saw an average of 2.1 squirrels per hour. Hunters should expect to surpass that total this year! Last winter was quite mild overall and coupling that with abundant mast is setting the stage for a banner year. The only question this year is can we set a survey record for observation rate.

Don't forget to turn in your Hunter Cooperator log at the completion of this year's hunt. **Logs should be returned no later than March 31, 2017.** In return we'll send you a report and a small gift as a token of our appreciation.

Encourage all of your friends to log their hunts as well. Have a safe and enjoyable squirrel season and thanks again for your support! And don't forget to take someone new to hunting out with you this year.

Appendix A. Mast and squirrel data collection regions in Kentucky.

